Remarks

This paper is being filed in response to the Office Action mailed on June 11, 2003 ("Office Action"). Claims 1-29 and 34-50 are pending. Claims 30-33 are herein cancelled. Claims 34, 35, 37, 38 and 44 are herein amended.

In the Office Action at pages 1, 2 and 5-6, Examiner states that claims 37-41 and 44-50 are "free of the prior art" and allowed, but that claims 37 and 38 are rejected under 35 U.S.C. § 112 ¶ 2 as lacking positive antecedence. Applicant herein submits an amendment to claims 37 and 38 changing "the first pH-neutralizing" to "the pH-neutralizing solution." Also, Applicant herein submits an amendment to claims 37, 38 and 44 incorporating the features of all of their respective base claims. Applicant respectfully submits that all of the allowed and/or allowable claims 37-41 and 44-50 are in appropriate form to proceed to issuance.

In the Office Action at pages 1 and 2, Examiner states that claims 30-33 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,500,476 ("Martin"). Applicant herein submits an amendment canceling claims 30-33 without prejudice. Applicant reserves the right to pursue and argue the patentability of these claims in another proceeding.

In the Office Action at pages 1 and 3-5, Examiner states that claims 1-29, 34-36 and 42-43 are rejected under 35 U.S.C § 103(a) as being unpatentable over Martin in combination with *Decontamination of Lettuce Using Acidic Electrolyzed Water*, 64 J. FOOD PROT. 5, 652-58 (2001) ("Koseki") in further view of U.S. Patent No. 6,113,853 ("Nakamura"). Applicant respectfully traverses this rejection for at least the following reasons.

Applicant respectfully submits that a *prima facie* case of obviousness is not present in this case. Applicant submits and that the combination of Nakamura with either Martin and/or

Koseki is inappropriate, because Nakamura teaches away from the combination and because there is no reasonable expectation of success in the combination. Furthermore, any combination does not teach or suggest the present invention.

Both Martin and Koseki utilize solutions that are basic or acidic. In Koseki, the disclosed electrolyzed acidic water has a pH of approximately 2.6 and the disclosed electrolyzed basic water has a pH of approximately 11.4. (Koseki, p. 653, Table I). In Martin, the disclosed antimicrobial solution has a pH of 10.5-11.5. (Martin, Abstract).

By contrast, Nakamura discloses a machine that delivers a neutral rinsing solution, where the machine is required to "**set the pH...of the sterilizing and rinsing water...to 6-8 at all times.**" (Nakamura, col. 9, line 2-3). Further, every independent claim of Nakamura ***expressly*** limits the solutions to a pH of 6-8. (Nakamura, claims 1 and 4). The machine even includes a valve designed to sense and prevent the output of solution that is not in the pH range of 6-8 (Nakamura, claim 4, line 46-49). The requirement of pH of 6-8 is repeatedly articulated throughout the specification of Nakamura. (Nakamure, col. 2, lines 20, 25, col. 3, line 33). This required range of 6-8 is best-classified as being a primarily neutral in character, rather than acidic or basic, and Nakamura itself refers to these solutions as being "neutral-region solutions." (Nakamura col. 2, lines 26-28, col. 12, lines 8-13, col. 13 lines 5-10).

Nakamura is thus in direct conflict with the pH requirements of Koseki and Martin. Furthermore, if a combination of the prior art would change the principle of operation of the prior art, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. See M.P.E.P. § 2143.01 at 2100-125. Also, when a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is

no suggestion or motivation to make the proposed modification. See M.P.E.P. § 2143.01 at 2100-124.

Because the interchange of the neutral-region Nakamura solutions for the acid or basic solutions of Martin and/or Koseki would bilaterally render any of the three references unsatisfactory for their respective purposes, there is no suggestion to combine the references. Furthermore, since the combination of the prior art would change the principle of operation of the prior art, then no *prima facie* case is made. For at least these reasons, Applicant respectfully requests that Examiner reconsider and allow claims 1-29, 34-36 and 42-43.

Additionally and independently, Applicant respectfully traverses the rejection of claims 1-29, 34-36 and 42-43 for at least the following reasons. Applicant respectfully submits that a *prima facie* case of obviousness is not present in this case. Applicant submits that the combination of Koseki with the primary Martin reference is inappropriate, because Koseki and Martin teach away from the combination and because there is no reasonable expectation of success in the combination. Furthermore, any combination does not teach or suggest the present invention.

The disclosure of Martin teaches away from Koseki and the use of electrolyzed water. Martin discloses an aversion to the use of water, both generally as well as in ionized form. Martin articulates the proposition that water has detrimental effects (Martin, Abstract) and implies that prior attempts to use water were insufficient (Marin, col. 6, lines 1-5). Importantly, Martin specifies that its treatment solutions should contain deionized water (Martin, col. 7, line 8). However, it is known in the art that electrolyzed water, whether basic or acidic, is ionized water by definition. In fact, it is the very presence or absence of ions, such as OH^- and H^+ for

nonlimiting example, that define the pH characteristic of a given substance (the presence of OH^- ions is what defines electrolyzed water as being "basic").

At the same time, Koseki teaches away from Martin and the use of electrolyzed basic water. Koseki experimented with electrolyzed basic water on lettuce to discover that electrolyzed acidic water was the appropriate antimicrobial for lettuce, and Koseki all but dismissed the use of electrolyzed basic water (Koseki, Abstract and page 657). Importantly, Koseki's conclusions were based on the reactions between microorganisms and the cellular and surface structures of lettuce, and the finding were limited to ***vegetables*** (Koseki, Abstract and page 657). There is an absence of disclosure in Koseki that electrolyzed acidic water and/or electrolyzed basic water would have the same reaction with the cellular and surface structures of mushrooms, which are a fungus and not a vegetable.

In fact, Koseki eliminates molds and yeasts from the surface of vegetables (Koseki, p. 655). It is known in the art, though, that mushrooms, like mold and yeast, are fungus which are all lacking in chlorophyll and other traits common to vegetables. Thus, while Koseki does articulate that its electrolyzed acidic water can be used for washing vegetables, it does not disclose or suggest the use of electrolyzed basic water for washing fungus. Importantly, Koseki even observes that its wash will eliminate certain types of fungus.

Each of Koseki and Martin must be treated as a whole and the fact that the references teach away from one another is an important consideration. MPEP § 2141.03 at 2100-120 through 2100-121. Because Martin teaches away from the use of ionized water and Koseki teaches away from using electrolyzed basic water or from washing fungus, there is no reasonable expectation of success and no suggestion or motivation to combine the references. Furthermore,

any combination does not teach or suggest the present invention. For at least these reasons, Applicant respectfully requests that Examiner reconsider and allow claims 1-29, 34-36 and 42-43.

Conclusion

Applicant believes that Applicant has fully responded to the Examiner's concerns and that all of the claims are in condition for immediate allowance. Applicant respectfully request immediate allowance of all claims.

Applicant request that any questions concerning this matter be directed to the undersigned at (609) 895-6639.

Respectfully submitted,

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